

Remarks

Claims 1, 3, 4, and 6-10 are pending in the application. Claims 1, 3, 4, and 6-10 are rejected. Claims 1, 6, and 10 are amended. Claims 11 and 12 are newly presented. No new matter is added. All rejections are respectfully traversed.

Claim 1 is amended to overcome the Examiner's rejection based on the second paragraph of 35 U.S.C. 112. No new matter is added.

Claims 1, 6, and 10 are amended to more distinctly claim the invention.

The invention receives data signals. A dumb node includes a radio receiver having a baseband processor for accepting a spread spectrum signal and for providing serial data signals composed of data frames each including a packet payload. A physical link has a first end at the radio receiver and a second end at a decoder. The physical link conveys the serial data signals from the radio receiver to the decoder. At the first end, an encapsulator encapsulates the data frames within Ethernet frames to be transmitted across the physical link only. At the second end, a de-encapsulator receives the Ethernet frames from the link and de-encapsulates them to recover the data frames. An intelligent node includes the de-encapsulator, the decoder, a protocol processor for developing addressed Ethernet data packets from the data frames, and a bridge for coupling the Ethernet data packets to a network.

Claims 1, 3, 4, 6, 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (U.S. 6,665,549) in view of Baum, et al., (U.S. 6,850,495 – “Baum”).

Regarding claims 1, 6, and 10, Reed describes a system that provides mobile devices, e.g., battery powered mobile devices, the locations of power replenishment services, e.g., battery re-chargers or new batteries. A communications link is established between a replenishment service provider and the mobile devices. The replenishment service provider alerts the mobile devices as to the availability of one or more replenishment services within a service area.

At col. 5, lines 4-50, and Figure 1, Reed describes the system as implemented according to the well known Bluetooth System. It should be understood that the invention is an improvement to systems such as Bluetooth Systems, which rely on a physical link to transmit serial data from a baseband processor for accepting a spread spectrum signal to a decoder. The difference between the invention and the prior art, such as Reed, is that the invention encapsulates the serial data within Ethernet frames for transmission across the physical link only. This novel feature allows a greater physical distance between baseband processors and decoders. As recited in new claims 11 and 12, it also allows multiple baseband processors to be connected to a single decoder. The invention allows the baseband processors to be in disparate locations, due to the increased physical distances enabled by the invention.

The Applicants respectfully assert that the combination of Reed and Baum cannot make the invention obvious. There is no motivation to modify Reed

according to Baum as required by MPEP 2143.01, at least. The Examiner will note that the invention first generates Ethernet frames for transmission across the physical link only. Then, later generates Ethernet packets for transmission to a network. Baum never suggests this. Instead, as shown in Figure 19, Baum encapsulates 1930 to transmit from an ingress access router via an Ethernet interface 1934 through an IP network core 1940 to an egress access router, see col. 10, lines 1-5, below:

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FIG. 19 is a high level flow diagram which illustrates operations which may be performed as a packet enters an IP network via an aggregation device and an (ingress) access router, and as a packet leaves an IP network via an (egress) access router and an aggregation device.

Baum teaches encapsulation for the known purpose of transmitting a packet through a network, which is what is recited, e.g., in the last element of claim 1, where the decoded and processed data frames are used to develop addressed Ethernet packets, which can use a bridge to access a network. The invention is distinguished in that the serial data from the baseband processor is first encapsulated as Ethernet frames for the purpose of transmission across the physical link only. Neither Reed not Baum teaches, or even considers, encapsulating and then de-encapsulating at either end of a physical link, as claimed. The stability of Ethernet frames, as compared to the serial data packets, is leveraged by the invention to physically increase the distance between baseband processing and protocol processing in system such as Bluetooth systems. Further, as recited in claims 11 and 12, the invention, by solving the distance problem, allows multiple baseband

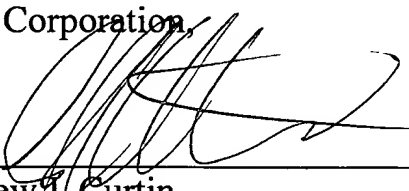
processors to share a single decoder and protocol processor, which is an improvement over the prior art.

In claims 3 and 7, the encapsulator includes means for tagging said data frames before they are encapsulated. In claims 4 and 8, the encapsulator inserts at least one of said data frames followed by padding data into a message section of one of said Ethernet frames. As stated above, the combination of Reed and Baum fails to teach encapsulating serial data frames within Ethernet frames for transmission across a physical link only, as claimed. The same is true for claim 9, where the dumb node includes a multiplexer for multiplexing host controller interface data with pulse-code modulated voice data into said data frames.

It is believed that this application is now in condition for allowance. A notice to this effect is respectfully requested. Should further questions arise concerning this application, the Examiner is invited to call Applicant's attorney at the number listed below. Please charge any shortage in fees due in connection with the filing of this paper to Deposit Account 50-3650.

Respectfully submitted,
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